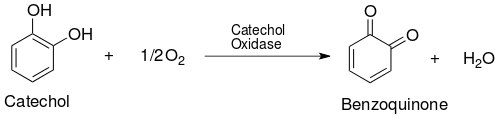
**Reaction behind Apple Browning**

The enzyme catecholase (or catechol oxidase) is common in plants. The substrates of catecholase are catechol and oxygen. The substrates react with one another within the active site of the enzyme. The products formed by this reaction are benzoquinone and water; since benzoquinone has a brown color, you can see that the reaction has taken place. This is called the fruit browning reaction. Benzoquinone inhibits the growth of microorganisms and prevents damaged fruit from rotting. In undamaged cells catecholase is stored in vesicles and does not interact with catechol.

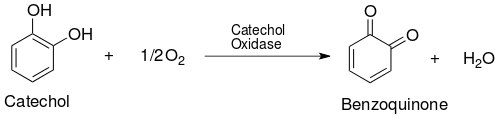


Many enzymes work only if there is a cofactor associated with them. Catecholase requires copper as a cofactor. We refer to cofactors that our bodies need as vitamins and minerals.

*Source: http://faculty.baruch.cuny.edu/jwahlert/bio1003/enzymes.html*

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